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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/029,233	12/21/2001	Akito Sato	MES1P060	3478

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EXAMINER

NGUYEN, LAMSON D

ART UNIT	PAPER NUMBER
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2861

DATE MAILED: 07/09/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/029,233

Applicant(s)

SATO, AKITO

Examiner

Lamson D Nguyen

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) 24-32 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 17-20 is/are rejected.
- 7) ☒ Claim(s) 5-16 and 21-23 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of claims 1-23 in Paper No. 6 is acknowledged.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 2 and 18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- In claims 2 and 18, it is not clear what a "same ink passage structure" is.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1- 4, 17-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Torgerson et al. (6,267,468).

Torgerson et al. teach a printing apparatus comprising :

- a print head having a plurality of nozzle arrays, each of the nozzle arrays having a plurality of nozzles arranged along a sub-scanning direction for discharging a same ink (figure 1 teaches a plurality of nozzle arrays 61-64, each array discharging a same ink)
- wherein at least one pair of nozzle arrays for discharging different inks are positioned such that nozzles of the nozzle array pair are arranged in a staggered manner (figure 1 teaches pairs of nozzle arrays 63 and 64 of different inks positioned such that the nozzles are staggered, column 4, lines 26-37 teach arrays 62 and 63 are of same colors and arrays 61 and 64 are of different colors)
- the staggered nozzle array pair is connected to a pair of ink passages for supplying to the nozzle array pair (figure 1 teaches ink passage 72 is connected to array 63 and ink passage 73 is connected to array 64)
- wherein the pair of ink passages have passage portions proximate to respective nozzles that protrude toward an opposite in passage (figure 3 teaches ink passage 72 of array 63 having ink passages proximate nozzles 21 or ink drop generators 40 that protrude to ink passage 73 of array 64)

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- wherein at least half of the plurality of nozzle arrays are configured to make a nozzle array pair arranged in a staggered manner (figure 1 teaches arrays 61 and 62 being a staggered pair and same is applicable to arrays 63 and 64)

Allowable Subject Matter

3. Claims 5-16 and 21-23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

4. The following is an examiner's statement of reasons for allowance:

* the primary reason for the allowance of claims 5-7 and 21-23 is the inclusion of the limitation of a pair of light ink nozzle arrays among a plurality of light ink nozzle arrays to have a same positional relationship at least in the sub-scanning direction as that of the staggered nozzle array pair. It is this limitation found in each of the claims, as it is claimed in the combination, that has not been found, taught or suggested by the prior art of record which makes these claims allowable over the prior art.

* the primary reason for the allowance of claims 8-12 is the inclusion of the limitation of a controller capable of performing interlace where only a plurality of main scan lines separated one another are recorded by each nozzle array in a single main scan pass, and where recording of successive main scan lines is achieved by a plurality of main scan passes that include at least one sub-scan feed therebetween and in the interlace recording, referring to the print data memory prior to a main scan pass, for printing data of a plurality of main scan lines that correspond to an overall width in the sub-scanning direction of the staggered nozzle array pair, and performing the main scan pass according to the referenced printing data. It is this limitation found in each of the claims, as it is claimed in the combination, that has not been found, taught or suggested by the prior art of record which makes these claims allowable over the prior art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

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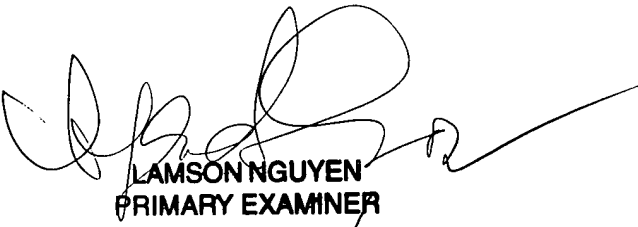
accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lamson D Nguyen whose telephone number is 703-306-4546. The examiner can normally be reached on 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nancy Le can be reached on 703-308-0750. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-5841 for regular communications and 703-308-5841 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1134.

June 26, 2003


LAMSON NGUYEN
PRIMARY EXAMINER
06/26/03